IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for rectificatively separating fluids comprising (meth)acrylic monomers in a rectification column by directly cooling the vapor comprising (meth)acrylic monomers rising to the top of the rectification column to form top condensate comprising (meth)acrylic monomers, ~~the~~ a condensation space at the top of the column being separated from the region of the rectification column containing ~~the~~ a separating internals only by at least one chimney tray from which the top condensate ~~form~~ formed is removed from the rectification column, ~~which comprises~~ the process comprising:

effecting the direct cooling of the vapor in the condensation space in at least two spray zones, which are spatially successive and are flowed through by vapor, by spraying supercooled top condensate comprising added polymerization inhibitor, and the temperature of the sprayed supercooled top condensate becoming lower from spray zone to spray zone in the ~~flow~~ flown direction of the vapor.

Claim 2 (Currently Amended) A process as claimed in claim 1, wherein ~~a~~ at least one of the two spray zones is supplied via annularly mounted spray nozzles.

Claim 3 (Currently Amended): A process as claimed in claim [[2]] 1, wherein the spray nozzles are full cone spray nozzles whose opening angle is from 60° to 180°.

Claim 4 (Original): A process as claimed in claim 3, wherein the opening angle is from 90° to 120°.

Claim 5 (Currently Amended): A process as claimed in claim 3 ~~or 4~~, wherein the spray cones overlap one and the same spray zone.

Claim 6 (Currently Amended): A process as claimed in ~~any of claims 3 to 5~~ claim 3, wherein the spray cones of spatially successive spray zones do not overlap.

Claim 7 (Currently Amended): A process as claimed in ~~any of claims 3 to 6~~ claim 3, wherein the spray cones of spatially successive spray zones just touch.

Claim 8 (Currently Amended): A process as claimed in ~~any of claims 1 to 7~~ claim 1, wherein the rectification column is flowed through by a molecular oxygen-containing gas.

Claim 9 (Currently Amended): A process as claimed in ~~any of claims 1 to 8~~ claim 1, wherein the condensation space has an offgas outlet.

Claim 10 (Original): process as claimed in claim 9, wherein the condensation space is an empty pipe which narrows conically toward the offgas outlet.

Claim 11 (Currently Amended): A process as claimed in ~~any of claims 1 to 10~~ claim 1, wherein the chimney tray has a slope on all sides toward the inner wall of the condensation space.

Claim 12 (Currently Amended): A process as claimed in ~~any of claims 1 to 11~~ claim 1, wherein chimney and chimney tray are configured with thermal isolation against the section of the rectification column containing the separating internals.

Claim 13 (Currently Amended): A process as claimed in ~~any of claims 1 to 12~~ claim 1, wherein chimney and chimney tray have a double-walled configuration.

Claim 14 (Original): A process as claimed in claim 13, wherein trace heating is mounted to the upper surface of the inner of the two walls.

Claim 15 (Currently Amended): A rectification column, comprising:

at least one chimney tray;

a spray condenser; and

a section which contains separating internals and is completed at the top by the at least one chimney tray and is continued into ~~a~~ the spray condenser having at least two spray zone, wherein the at least two spray zones are spatially successive and are flowed through by vapor, the vapor being cooled by spraying supercooled top condensate, and the temperature of the sprayed supercooled top condensate becoming lower from spray zone to spray zone in the flown direction of the vapor.